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## INFORMATION REPORT INFORMATION REPORT

## CENTRAL INTELLIGENCE AGENCY

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COUNTRY	USSR (Armenian SSR)	REPORT	
SUBJECT	Construction Methods in Private Housing in the Armenian SSR.	DATE DISTR.	31 October 1956
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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE

1. [redacted] construction of private houses in the Armenian SSR. All these houses were one story high, sometimes with a basement, sometimes without a basement. There were two general sizes; 5 x 11 meters and 8 x 8 meters; the height from ground to cornice was 3.5 meters. Houses consisted of two or three rooms, with entry way and kitchen. There were no bathrooms. These houses had water and electricity, but no gas and no sewerage lines. There was an outhouse out back. The great majority of these houses were heated with coal stoves, but a few had central hot-water heating.
2. The price of construction was estimated by the local proyektnoye byuro, (project bureau) and ranged between 300 and 400 rubles per square meter. A reasonable average would be 330 to 350 rubles per square meter. A private home would take between 200 and 250 man-days to complete.
3. The foundations of these houses were stone and lime mortar, and the walls were stone, local black or rose duff. The walls were 50 to 60 cm thick. When the walls were all up, that is, the house having a bottom and four walls but open at the top, ten x 20 cm or ten x 18 cm wooden beams were laid across the top of the walls, from one side to the other, that is, as a level horizontal sort of covering, parallel to each other and at intervals of from 65 to 70 cm. These beams were of yellow pine (cham) or white pine (kyoknar); of these the yellow pine was better but more expensive. The next step was to cover these beams with pushta, laid one right next to the other on top of the beams and across them, that is, on the same horizontal plane as the beams, and directly on top of them, but at right angles to their direction. These pushta were basically the outer extremities of a log after it has been cut up into boards at the sawmill. The pushta would thus be on one side a smooth sawed surface and on the other side the original rounded and barked outer surface of the tree. In other words, the pushta was the smaller piece of the two, produced by passing a saw cut parallel to a log axis about 4/5 of the radius out from the center. The next step was to cover the pushta with 12 to 15 cm of a clay paste. On top of this was laid another layer, of ordinary clay, ten to 15 cm thick. All this was for insulation. Then, over this was erected

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a peaked roof made of wood. This roof was covered with tile or azbomaner, a composition made of cement and asbestos, in the case of corrugated iron.

4. Inside walls were plastered and painted with calcimine, either white or colored. Floors were always wood. The kitchen and entryway were cement terrazzo. Windows were always double, for winter protection. Ceilings were wood, covering the beams from underneath. In between the beams, horizontally, and in between the ceiling and the pushta, vertically, an air space was left for insulation. See Sketch No. 1 for layout.
5. The only place in the construction of these houses where precast concrete was used was at the top of and behind the windows, that is, the lintels. The use of precast concrete had definitely decreased in the last few years, in all types of housing. Cement was extremely deficient and virtually unobtainable. No stores had it to sell, and the builder who erected these houses had to steal all the cement he ever used. Factories could get cement to build an annex or make repairs, where private housing construction simply could not get any. This situation existed from 1947 or 1948 until the time source left.
6. The amount of private housing construction was on the increase. In Leninakan, for example, the figures for private houses constructed were as follows:

1949	250 private houses
1950	290 private houses
1952	350 private houses
1954	480 private houses
1955	600 private houses started

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In the years 1946 - 1947   abnormally heavy private housing construction in Armenia. During these years, some 100,000 repatriates arrived in Armenia, and many of them wanted to build private houses. By 1949, however, the situation had returned to normal, and the above figures show a clear picture of the increase in private housing construction.

In 1955, the chief architect of Leninakan was in a quandary over the fact that there was almost no land left in the poselki for people to build private houses; there had been so much construction that the land was all used up. The architect said he was considering enlarging the city of Leninakan toward Maisyan and Toparklu to get more land.<sup>1</sup>

#### Building Materials

All cement came from Davarlou, and source heard there were many prisoners, criminal rather than political, working there.<sup>2</sup> The cement was of a very good quality. It never came in bags or sacks of any sort; it was just dumped as loose powder in trucks or wagons. The majority of cement from this factory was shipped to other parts of the USSR and was not available for use in the Armenian SSR. Cement cost 0.60 rubles per kilo. This was the official price, but, because of its scarcity, the actual price was about one and a half times that.

All lumber came from other parts of the USSR, since there is no lumber in the Armenian SSR. Lumber officially cost 250 rubles per cubic meter, but since it was so scarce, the actual price was about one and a half times this.

The stone was quarried locally in Leninakan. There were two large stone quarries, the Khachkar Quarry and the Vartbagh Quarry, between Leninakan and Arpa Chay.<sup>3</sup> A piece of stone about 40 x 40 x 60 cm cost five rubles in 1947, and in 1955, the same piece cost 1.10 rubles. This was the quarry size, not the cut/cleaned size.

Two kinds of sand were used, quarry sand and Arpa Chay sand. The quarry sand came from Karakilise, a quarry on the road to Maralik, about 15 to 17 miles from Leninakan.<sup>4</sup> Both gravel and sand were obtained from the Arpa Chay. Sand cost about 50 rubles per cubic meter in 1955, and about 180 rubles per cubic meter from 1946 until 1948. Gravel cost the same as sand.

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12. Lime came from a small factory in Maisyan and a large lime factory in Dzhadzhur. (N 40-51, E 43-57). Criminal prisoners ~~were~~ employed in the latter. Source is not sure but thinks lime cost 300 rubles per ton in 1947 and 1948.
13. Very little brick was used in construction in Leninakan. There was a brick and tile factory near Gananchatsman Trest (sic) in Leninakan. There was also a large new brick and tile factory, started in 1953 and not yet completed in 1955, near Evako Baza in Leninakan.
14. All the glass was very poor quality, and source does not know where it came from.
15. Nails and screws came from other parts of the USSR, source suggests perhaps Rostov (N 47-15, E 39-53) or Kharkov (N 40-57, E 48-45).
16. Azbofaner came from Yerevan (N 40-11, E 44-30) and Tbilisi (N 41-42, E 44-45).
17. Items such as nails and screws, became more plentiful after 1953. Also, oil paint supplies, both brushes and paints, were available after 1953; before that they could not be found anywhere. Cement and lumber were consistently very deficient from 1947 to 1955, although factories could get these items, as they could brick and tile, when private housing could not.

 Comments:

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1. Maisyan (N 40-51, E 43-51) is also known as Ortabilisa and Orgakilisa. Toparlu is probably Topar (N 40-51, E 43-52).
2. Davarlu is probably Davalu, (N 39-45, E 44-45). The village has apparently been renamed Ararat, although coordinates for Ararat have been given as N 39-50, E 44-42. The Ordzhonikidze Cement Plant is located in Ararat.
3. The Arpa(Chay) River, also known as Reka Badzhigly Chay, flows past the western edge of Leninakan.
4.  probably referring to the village of Malaya Karakilisa (N 40-43, E 43-50). A number of small villages in this area, however, are named Karakilisa, and a Mt. Karakilisa is just southeast of Malaya Karakilisa. Coordinates for Maralik have been given as N 40-35, E 43-55 and N 40-33, E 43-52.

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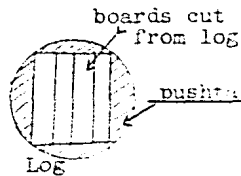
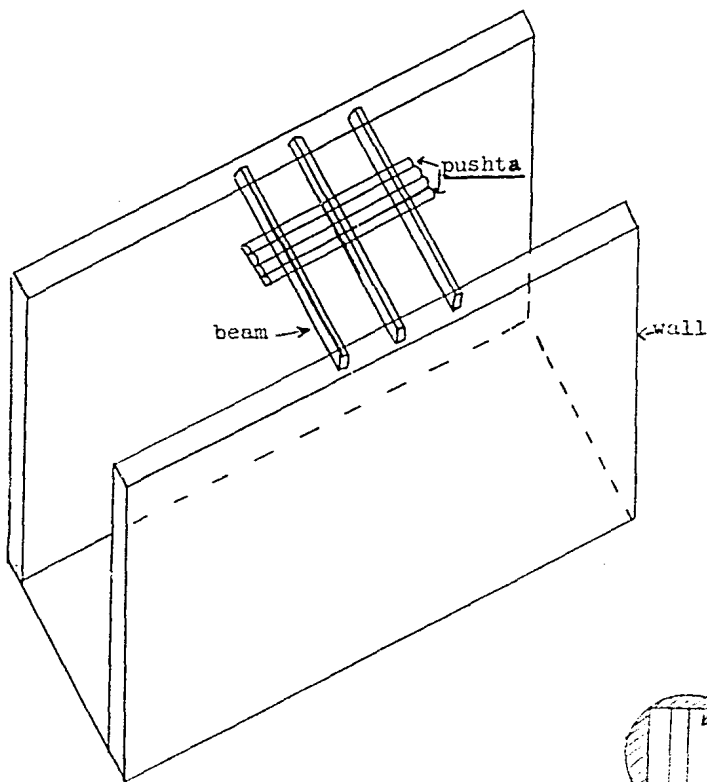
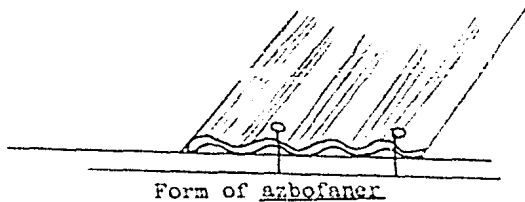
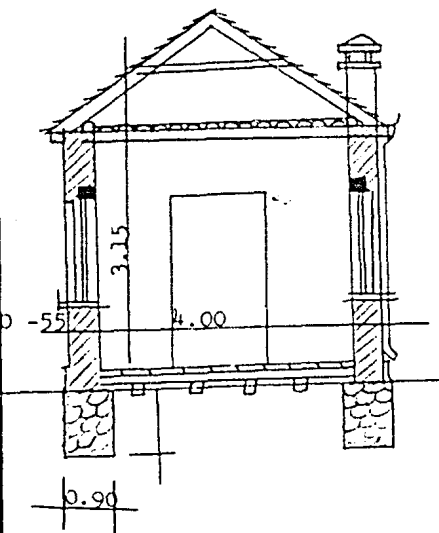
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Sketch No. 1



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